

## WHAT IS CLAIMED IS:

1. A compensation system for a firearm, said compensation system comprising:

5 a barrel having a longitudinal bore and defining thereby a firing axis;  
 a compensator assembly including an attaching means for releasably  
 attaching said compensator assembly adjacent a muzzle end of said barrel; and  
 a gas discharge port formed in said compensator assembly, said gas  
 discharge port not being aligned with said longitudinal bore and  
 communicating with an inner bore of said compensator assembly.

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2. The compensation system for a firearm according to claim 1, wherein:

said inner bore includes a first land formed about an inner periphery of  
 said inner bore, said first land defining a first diameter which is larger than a  
 barrel diameter of said barrel.

3. The compensation system for a firearm according to claim 2, wherein:

said first land is substantially co-planar with a forward wall of said gas  
 discharge port.

4. The compensation system for a firearm according to claim 3, wherein:

said first land is oriented substantially perpendicular to said firing axis.

5. The compensation system for a firearm according to claim 1, wherein:

said barrel includes a recess formed therein; and  
 said attachment means is configured to be releasably accepted within said  
 recess.

6. The compensation system for a firearm according to claim 5, further comprising:

a tensioning means for selectively preloading said attachment means against said recess in a direction substantially parallel to said firing axis.

7. The compensation system for a firearm according to claim 6, wherein:

said tensioning means is a metallic spacer element.

8. The compensation system for a firearm according to claim 6, wherein:

said barrel includes a threaded bore formed beneath said longitudinal bore; and

5       said tensioning means is a bolt that threadedly engages with said threaded bore.

9. The compensation system for a firearm according to claim 8, wherein:

said bolt includes a raised flange that selectively tensions said attachment means against said recess.

10. The compensation system for a firearm according to claim 1, wherein:

said barrel includes a gas aperture which is aligned with said gas discharge port when said compensator assembly is attached adjacent said muzzle end of said barrel.

11. A compensation system for a firearm, said compensation system comprising:

- 5 a shroud defining a longitudinal bore adapted to receive a barrel therein,  
said shroud having a firing axis;  
a compensator assembly including an attaching means for releasably  
attaching said compensator assembly adjacent a muzzle end of said shroud; and  
a gas discharge port formed in said compensator assembly, said gas  
10 discharge port not being aligned with said longitudinal bore and  
communicating with an inner bore of said compensator assembly.

12. The compensation system for a firearm according to claim 11, wherein:

said inner bore includes a first land formed about an inner periphery of  
said inner bore, said first land defining a first diameter which is larger than a  
muzzle end diameter of said compensator assembly.

13. The compensation system for a firearm according to claim 12, wherein:

said first land is substantially co-planar with a forward wall of said gas  
discharge port.

14. The compensation system for a firearm according to claim 13, wherein:

said first land is oriented substantially perpendicular to said firing axis.

15. The compensation system for a firearm according to claim 11, wherein:

said shroud includes a recess formed therein; and  
said attachment means is configured to be releasably accepted within said  
recess.

16. The compensation system for a firearm according to claim 15, further comprising:

a tensioning means for selectively preloading said attachment means against said recess in a direction substantially parallel to said firing axis.

17. The compensation system for a firearm according to claim 16, wherein:

said tensioning means is a metallic spacer element.

18. The compensation system for a firearm according to claim 16, wherein:

said shroud includes a threaded bore formed beneath said longitudinal bore; and

5       said tensioning means is a bolt that threadedly engages with said threaded bore.

19. The compensation system for a firearm according to claim 18, wherein:

said bolt includes a raised flange that selectively tensions said attachment means against said recess.

20. The compensation system for a firearm according to claim 11, wherein:

said shroud includes a gas aperture which is aligned with said gas discharge port when said compensator assembly is attached adjacent said muzzle end of said barrel.

21. A compensation system for a firearm, said compensation system comprising:

a shroud having a longitudinal bore;

5 a barrel releasably housed within said shroud and defining thereby a firing axis, said barrel including a flange disposed on a distal end of said barrel for arresting a longitudinal translation of said barrel within said longitudinal bore;

10 a compensator assembly including an attaching means for releasably attaching said compensator assembly adjacent a muzzle end of said barrel; and

a gas discharge port formed in said compensator assembly, said gas discharge port not being aligned with said longitudinal bore and communicating with an inner bore of said compensator assembly.

22. The compensation system for a firearm according to claim 21, wherein:

said shroud includes a recess formed therein; and

said attachment means is configured to be releasably accepted within said recess.

23. The compensation system for a firearm according to claim 22, further comprising:

a tensioning means for selectively preloading said attachment means within said recess in a direction substantially parallel to said firing axis.

24. The compensation system for a firearm according to claim 23, wherein:

said tensioning means is a metallic spacer element inserted between said attachment means and a rear portion of said flange.

25. The compensation system for a firearm according to claim 21, wherein:

said shroud includes a threaded bore formed beneath said longitudinal bore; and

5        said tensioning means is a bolt that threadedly engages with said threaded bore.

26. The compensation system for a firearm according to claim 25, wherein:

said bolt includes a raised flange that selectively tensions said attachment means against said recess.

27. The compensation system for a firearm according to claim 28, wherein:

said shroud includes a gas aperture which is aligned with said gas discharge port when said compensator assembly is attached adjacent said muzzle end of said barrel.

28. A method for releasably attaching a compensator assembly adjacent a muzzle end of a barrel of a firearm, said compensator assembly having an attachment means on a rear end of said compensator assembly, said barrel having a firing axis and including a threaded end opposite said muzzle end and having a recess formed adjacent said muzzle end, and said firearm having a frame defining a threaded aperture formed therein, said method comprising the steps of:

moving said attachment means into engagement with said recess;

tensioning said attachment means within said recess in a direction substantially parallel to said firing axis;

inserting a mating tool into said muzzle end of said barrel;

rotating said barrel, thereby causing said threaded end of said barrel to threadedly engage with said threaded aperture; and

halting said rotation of said barrel via said mating tool when a predetermined torque is detected.